

## Training the design militia: in-service design education for the non-professional practitioner

Conrad Taylor, *ISOGRAPHY — and Popular Communication Courses Ltd*

### Abstract:

Most of the documents and very many publications which are produced in business, government, the health services and in voluntary organisations are not produced by design professionals. But there has been relatively little discussion about how to provide for the training needs of this 'design militia'; debates about design education have concentrated on the education of the professional designer.

For fifteen years I have conducted one- and two-day training courses in the design of publications, publicity materials and information products, sometimes in conjunction with desktop publishing training. Much of these courses have been organised and promoted through Popular Communication Courses Ltd, which has brought me into contact with colleagues in the UK, Sweden and the United States who also provide design education within this commercial model.

In this paper I shall reflect on my experiences both as a learner and as a teacher of design skills, discuss the point of view which informs the kind of design education which I conduct, and describe the methods used. I shall also explore the advantages and shortcomings, the dilemmas and challenges of this educational model, to open a dialogue with the more formal and extended model employed by conventional tertiary education.



Photo: Izhar Cohen

One of the more unusual training assignments to come my way this year was a week in Ramallah, in the Palestinian Territory of the West Bank, as a volunteer teaching Web site design and production to a joint Palestinian–Israeli peace project, 'Peace Quest'. Here we are considering how to create good-looking Web graphics that also load quickly and work on all computers.<sup>1</sup>

I taught myself how to design while producing reports, newsletters and publicity material for voluntary organisations and human rights campaigns, often on extremely tight budgets and with primitive print techniques. (The poster far right was produced by stencil duplicating on a total budget of £5.00 in 1982.)



## Part 1

IN COMMON WITH MANY OTHER INFORMATION DESIGNERS, I do not have a formal design education. My original intention was to pursue a career in science, but my mathematical ability was not good enough. At university I studied some philosophy and the history of science, and then dropped out. But meanwhile I had become involved in voluntary social work and human rights campaigns, and in this activity I started along the path which would develop my skills as a writer, illustrator and designer.

At primary school I had been introduced to calligraphy, and learned to operate stencil duplicators; in adolescence I taught myself to type, improved my drawing and cartooning skills and became a competent photographer. I have always enjoyed writing. So when I became involved in organisations such as the British Campaign for Independent East Timor and the Ad-Hoc Group for Democracy in Thailand, it often fell to me to design posters and exhibition panels, write and ‘typeset’ newsletters on IBM Selectric golfball typewriters, paste up artwork, rub down Letraset and Letratone, and even make plates and operate small offset litho presses.

Similarly, in the years between 1975 and 1980 when I was employed by the Europe–Third World Research Centre, then by Third World First, and then by Peggy Duff as her personal assistant at the International Confederation for Disarmament and Peace, I tended to end up as the communications specialist, working at the keyboard, the light-box, the drawing board and the printing press.

But these are *production* skills. How did I learn my *design* skills? In common with a large number of other people with communication responsibilities in industry and voluntary work, I learned as I went along – reading books, stealing good ideas from other people, and analysing what worked and what didn’t – and why.

## Ways of learning to do design well

Some interesting assumptions seem to be made by people who teach design at a college level. For instance, it is thought that you can take school-leavers, put them through a three-year course, and end up with people who are better qualified to do design work than just about anyone else. It is also assumed that most things that need designing will be done by people called ‘designers’ – or at least that they would be best done by such people.

However, there are grounds for scepticism. As Cal Swann pointed out at the 1995 conference on the teaching of typography, *Typography: New Era, New Language*, designers probably are responsible for at most about three percent of all published materials. (Incidentally, I was the only design educator out of about 80 people there not to be affiliated to an institution of tertiary education.) As an example, he described the situation at the University of South Australia:

In the University of South Australia, on just the one campus on which I work, there are over 500 Macs and PCs ... amongst 600 academic and administrative staff ... and many have desktop publishing software. ... Our Flexible Learning Centre which produces the print material for the distance delivery of 650 university courses is a small publishing company that employs 23 academic and 60 general staff, eight of who are editors and only two graphic technicians who help with graphs and diagrams. The FLC is the second largest user of Australia Post in South Australia. There isn't what *we* would call a 'graphic designer' in sight.<sup>2</sup>

Off the record, Cal Swann noted that it is these non-qualified designers who have devised workable DTP templates for the production of distance learning materials; the one time they did involve a qualified designer, the result was a disaster in terms of communication effectiveness.

The situation which Cal Swann describes at FLC is echoed from millions of offices and business premises, government departments and universities throughout the world. Software products such as Microsoft Word and PowerPoint, PageMaker and QuarkXPress, FrameMaker and Ventura Publisher have put into the hands of millions of secretaries and managers and technical authors precisely the same tools are used by professional graphic designers.

The one thing that you cannot get off the software installation disks is, of course, design know-how. That has to be acquired from elsewhere.

There are lots of ways of acquiring a greater understanding of typography, graphic design or information design which do *not* involve three years' fulltime attendance at a college. Here are some of them:

- reflecting on and learning from one's own experiences and experiments
- reading design books
- participating in conferences such as this one
- talking to friends who know a bit more than you do
- participating in Internet discussion lists such as InfoDesign, TECHWR-L, Framers, LANTRA and so on
- attending short training courses and seminars
- joining an appropriately stimulating organisation, such as the Information Design Association

## PHOTO TYPE SETTING

On Thursday 24th February at 3.00, Conrad Taylor will give an introductory talk on Phototypesetting, in Room 346. All Visual Communication students & staff are welcome, but the talk will be oriented towards the B. Hums. 2nd year book design project.

The talk will be followed at 4.10 by a visit to a local typesetters. There are only 6 places on the trip - see him in Letterpress for yours.

Goldsmiths students were not taught about photocomposition, so I organised this talk and outing while working there as a part-time technician.

The particular method of learning about design that I want to say more about in this session, is short courses and training seminars of one, two or three days' duration.

I started my career in this almost accidentally, during a period of my life when I was largely unwaged and looking after two small children, but also active in the Law Centres Federation. I ran a workshop about Annual Reports at one of the LCF management training conferences, which was much appreciated. I also put on a couple of courses about publicity and newsletter design and production for the London Voluntary Service Council, which were deemed a success, and I attempted to run an adult education class on the same topic for Thameside Adult Education Institute. This last project was a failure, due to inconsistent attendance.

Another formative experience I gained at this time was during a brief stint as a technician in the letterpress room at Goldsmiths College. I do not know how typical this is of departments of visual communication, but a large part of the teaching of practical design and production skills was in fact imparted by the technicians, not the lecturers, most of whom were unaware of modern publishing techniques.

I also have to say that not only my design practice, but also my practice of design education, was relatively under-theorised at this time (1982–83). This, as I am about to say, is not unusual among designers...

### The mysteries of design

In his introduction to *Design Discourse*, Victor Margolin<sup>3</sup> comments how difficult it is to write on the theory and history of design and to construct a field of design studies, because designers themselves seem to show little interest in thinking about and explaining why they do what they do. Graphic design, as I say by way of introduction to students on my two-day course *Layout and design basics*,<sup>4</sup> is notoriously under-theorized; when you ask a designer why he or she 'did it that way', the response is not that coherent.

Furthermore, most books on graphic design are little more than collations of inspirational examples, perhaps with historical narration or structured into a taxonomy of design trends, but without any hint of *how* these products were designed and *why* they were designed the way they were.

This lack of an explanation of how design is done is frustrating to people who have to work with designers (as colleagues, or clients), and also for those people who are hopeful of learning how to become better at design themselves because fate has decreed that they are now suddenly faced with editing the company newsletter, designing forms, or creating product documentation, training materials or procedures manuals.

To the outsider, therefore, it might seem that good designers are possessed of a magical talent, or have discovered some secret which they are selfishly cloaking in a hermeneutic mist. Regrettably the latter is not true, for then all we would need to do is roast some great designers over a fire until they confessed to the secrets of their craft.

## Two modes of thought

From my own experience I know that while I am working on the design of a publication, poster or leaflet, many of the typographic and compositional decisions which I make do not involve any conscious thought – or, to be more precise, they do not involve *verbal* thought.

For a while, as a young philosophy student, I was of the erroneous opinion that if it wasn't verbal it couldn't be called thought; now I understand that there are kinds of decision-making activity which do not require verbalisation, and it should not therefore be so surprising that someone who can design a great poster may be at a loss to explain exactly why she put things where she put them. She is not keeping back any secrets; but she is at a loss to find the words to *explain* what she does not need words to *achieve*.

Incidentally, I believe that we may have much to learn as design educators from the discoveries which Roger Sperry and others made at CalTech in the 1960s concerning the lateralization of brain function. These suggested that that verbal reasoning, and the appreciation of shape and spacial relationships, are processed by different centres of the brain.<sup>5</sup>

Another CalTech educator, art teacher Betty Edwards, was inspired by these discoveries to formulate a method for teaching drawing to people with no previous experience, in a ten-week course meeting once a week; the results of her method are remarkable, as can be seen in her books.<sup>6</sup> Edwards comments that people tend to draw what they *think* should be there; her course of instruction involves exercises designed to disrupt what she characterizes as left-brain dominance, so that co-ordination between hand, eye and the visually-oriented parts of the brain can be developed and strengthened.

She also comments that there is a cultural bias that favours education in verbal and numerical skills. To be illiterate is shameful in our society and shows that one has not been properly educated; to be unable to draw is seen rather as the lack of a special talent. But in an information age that must increasingly come to value the whole gamut of communication skills, including the visual ones, can general education in our society afford to persist in this marginalisation of visual education?

## Joining the circus

To return to the autobiographical element of this presentation, let me remind the reader that by 1984 I had acquired some experience of running short courses in design for non-designers in voluntary organisations; but I did not have much theory of how a design education should proceed, nor did I know anyone else teaching design in this way.

In 1984, while running a small one-man design business from above a typesetting shop, I met Colin Ringrose of Rotobord Ltd, and Björn Karlsson of Populär Kommunikation in Sweden, who were preparing to run short courses in artwork preparation, print buying, publication design and layout and design, under the name 'Popular Communication Courses'.

Both photos: Conrad Taylor



**Above:** Björn Karlsson, shown leading a training session in Jönköping in Sweden, started to run short training courses based on an American model, and recruited Jan V. White as one of the Popular Communication course leaders



**Left:** Colin Ringrose is the Managing Director of Popular Communication in the UK.

Björn Karlsson started *Populär Kommunikation* in Sweden in the 1970s. The courses he offered had a large measure of American inspiration, being modelled in part on courses offered by the Dynamic Graphics Educational Foundation (DGEF), and in part on the writings and lectures of Jan V. White, an

American publication designer, originally trained as an architect, who was a publication designer for *Time-Life* for twenty years before striking out on his own.

Björn Karlsson heard Jan White speak at *Folio*, the New York conference for magazine publishers, and the history of Popular Communication has been in large measure determined by that encounter. Jan joined the team of PK/PCC course leaders as our 'superstar'. I therefore became his colleague when I joined the team in 1984; and his approach to design, and to design education, influenced my own work and teaching.

### White space — and rules

The name of Jan V. White does not feature greatly in the scholarly literature, but his publications and his entertaining lectures and videotapes have been a great inspiration to many people with publication design responsibilities, including some people in this audience.

The initial focus of Jan's writing, as in *Editing by Design* and *Mastering Graphics*, was on periodical design. But in the mid-1980s, an extended commission by Xerox to look at their corporate publishing standards brought him to write more about what we'd call information design. This is evidenced in his later books, such as *Graphic Design for the Electronic Age*.

But Jan White's tendency to deploy a form of visual rhetoric akin to that used in document/information design was already evident in the bold use of white space and typographic hierarchies in the design of his own books – and in the magazines which he redesigned for clients in North and South America. Particularly in his designs for trade journals and the medical press, presented as example in his books, we can see him experimenting with a kind of hybrid genre, magazines which embody information design principles in their structure and typography.

At Jan White's home in Westport, Connecticut, Conrad and Jan explore the capabilities of *ReadySetGo!* DTP software. Jan later wrote **The Grid Book** to accompany the software.

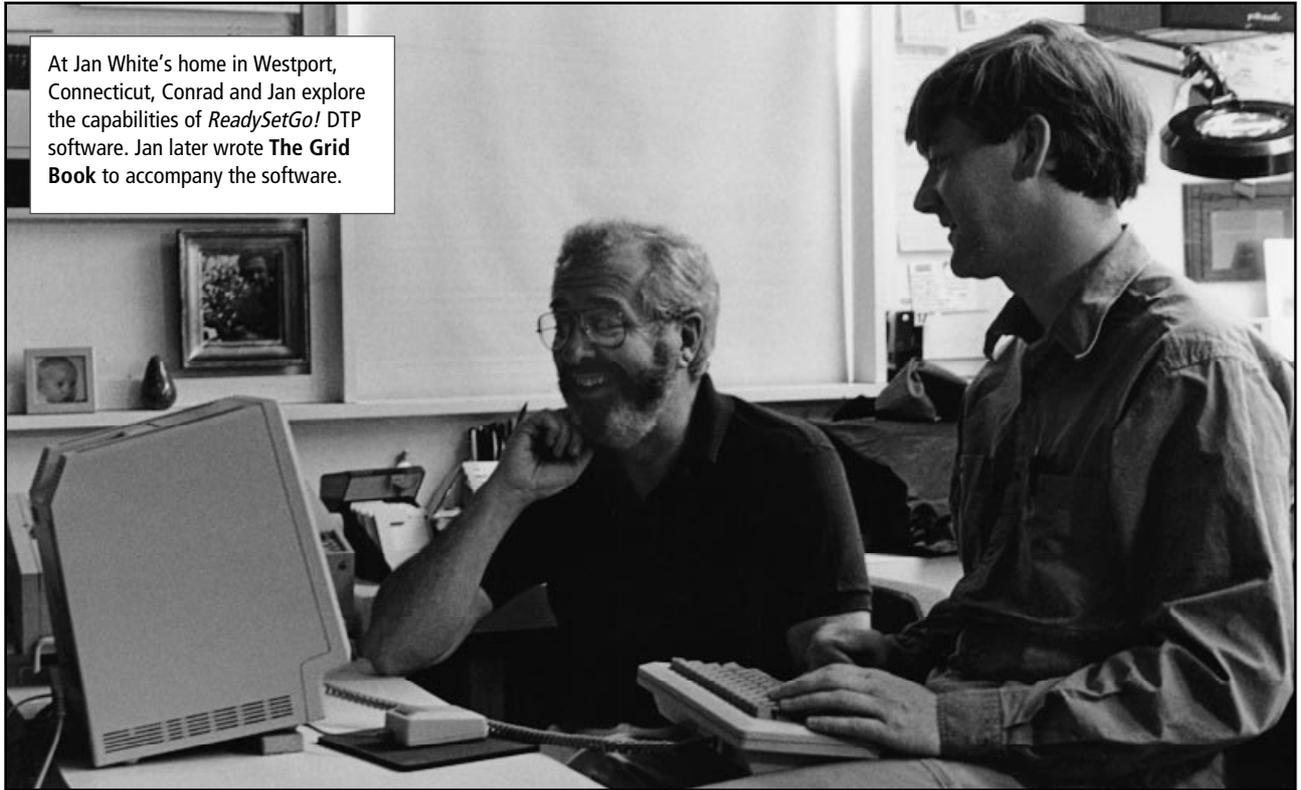


Photo: Sang-usa Suttitanakul

But his most valued contribution for people trying to learn how to design has been his articulation, in very clear and easy-to-follow language, what publication design is about; and his insistence that it is not a mystery, but a rational activity of manipulating the elements of a publication in order to achieve certain defined communication outcomes. To quote from the introduction to *Editing by Design*:

This is intended to be a useful book. A how-to book... It deals with the interrelationship of two functions in the production of publications that are normally thought of as separate: editing and design. It attempts to show that these functions are not separate, but rather two facets of the same act: the thinking underlying both is identical, only the technology differs. ...

The trouble with many how-to books is that they give you examples of the *what* and lots of ways of *how*, but seldom enough of the *why*. ... What you need to know is the reason behind a design, as well as the characteristics that make it applicable to other situations. It is not enough to show a good solution without defining what makes it good – and what it is good *for*.<sup>7</sup>

For example, Jan taught that good magazine design presents the stories to make them look inviting and to help the undecided and browsing reader to engage with the most interesting aspects of those stories. In practice, this leads to some handy rules:

- Remember that a reader who picks up a magazine holds it by the spine and flips through the pages, either backwards or forwards. Therefore the upper, outer corners of your pages are the best place to put interesting material such as photographs, headlines and pull quotes.<sup>8</sup>

- Think about the sequence in which you want the reader to engage with the elements on the page, and use positioning of the elements and a hierarchy of visual strengths to ‘entice’ the reader along that path.<sup>9</sup>

With respect to product manuals, directories and other kinds of reference materials, Jan has other ‘rules’ to offer:

- In a reference publication, *findability* is even more important than *readability*. Pay special attention to devices such as running heads, indexes, bleed-out tabs, page numbers and other navigational devices.
- Examine the structure of the text, and make that structure typographically explicit through bold headings, indentation, deployment of white space, rules which add emphasis and other such devices.
- Use white space and rules to group what should be grouped, and to separate what should be separated.

### Teaching a functional approach to design

It can be seen that even though the intellectual antecedents of his design philosophy are not made explicit in Jan White’s writing, which is very consciously non-academic in tone, he has what some of us here might call a ‘modernist’ agenda and a functional approach to design as a means of enhancing communication. Some features of this approach, which has become almost the Popular Communication ‘party line’, are as follows:

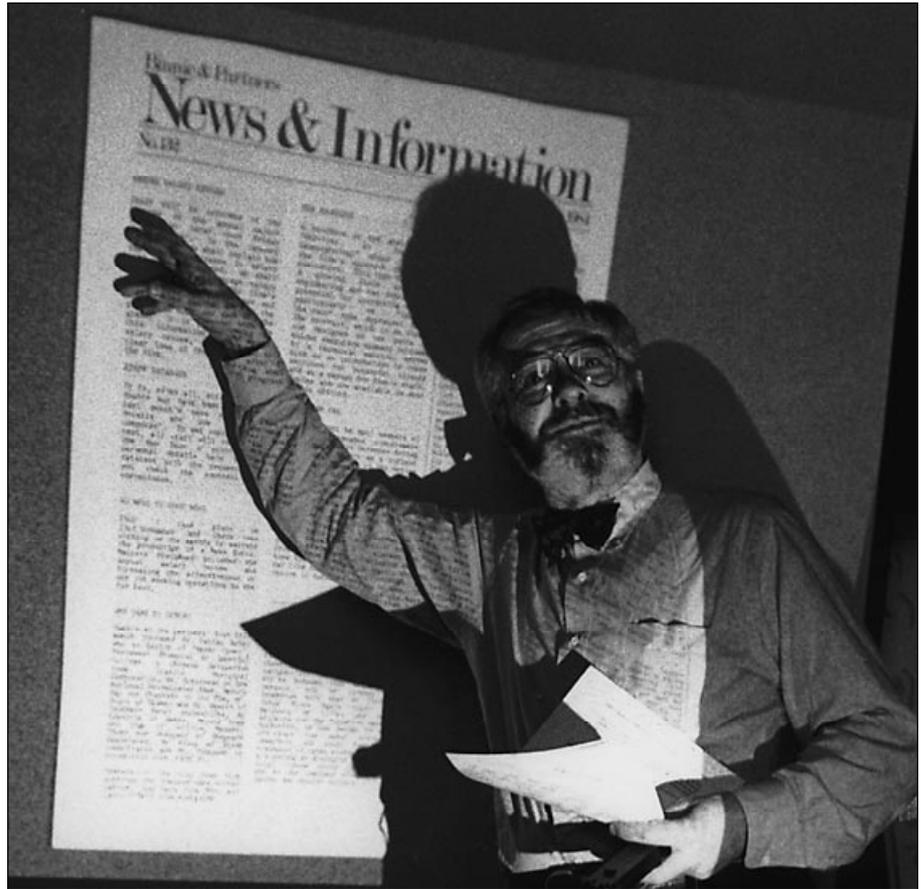
- Anyone who does design must be literate and must *read the text*, since the function of design is to support the communication of the essential message or information. Editing and design should not be distinct processes.
- It is important to put oneself in the reader’s shoes. This has several aspects to it:
  - One must remember that the reader is *naive* to the content of the publication and makes a journey of discovery into it to learn what it is about.
  - Physical aspects of the encounter between the reader and the publication must be taken into account, such as size, binding, envelope in which it is delivered, distance from which it is first viewed and so on.
  - The reader is not necessarily interested in the content; the design must try to promote its relevance to the reader. (Jan White sums this up as ‘the WIIFM factor – *What’s In It For Me?*’)
- Typography is said to be ‘language made visible’, and plays a role similar to punctuation and paragraphing in the way it groups, separates, sequences and structures verbal information. Typography which reinforces the structure of intended meaning in a text is good, and typography which fails to do this, or even disrupts this structure, is bad.

If we hedge-priest design educators have a hedge-bishop, then surely Jan V White verily must be It. (Or our hedge-Chief Rabbi, perhaps.)

Despite scant recognition by the academic community – which fact I'm sure would trouble him not a whit even were he to consider it – he has helped many thousands of people develop a functional approach to graphic design, and given them sound rules of thumb to guide them as they learn design's subtleties.

As a presenter, Jan's theatrical style works best in my opinion in large spaces, and with big audiences; it scales less well to the interactivity one must as an educator deploy with small groups.

Photo: Conrad Taylor



- There exists to some extent a shared language of typographic and design conventions which is understood by the public, and going along with these conventions makes clear communication easier. Where a designer wishes to extend these conventions or establish new ones, the patterning must be made very clear so that the reader can interpret what it signifies.
- From the foregoing, it is possible to derive some design 'rules of thumb' such as: white space and boldness makes subheadings stand out; page numbers are most sensibly positioned at the edge of the page furthest from the binding; and so on.

Now, if one wants to nitpick with the above, there is plenty of opportunity to do so. The degree to which graphical conventions are shared is mediated by cultural factors, and the concept of 'genre' also enriches this discussion.

Also, there is much of what a designer actually does that is *not* addressed in Jan White's books and lectures, and he once admitted to me that issues such as proportion, balance, composition and the precise disposition of space between page elements is something he knew very well how to do, but not to explain; which I see as being linked to the problem of non-verbal reasoning I explored earlier.<sup>10</sup>

However, for didactic purposes, this view of what design is about has some strong advantages when it comes to teaching 'non-artistic' people. It offers both a point of departure for the pedagogical conversation and a suggestion about how that conversation might proceed:

- The assertion *that typography is language given a visible form* allows people to build out from their linguistic competences to an understanding of what they want design to do for them, and provides an extended metaphor that assists rapid learning.
- The assertion *that it is important to understand how readers interact with texts when they encounter them for the first time* helps students to use their experiences as *readers* to inform their efforts as *designers*, and to come to conclusions about what works and what is risky. I have also found that rapidly productive discussion exercises based on document analysis can enhance this aspect of learning.
- The assertion *that there are graphic conventions widely understood* is something else that can be explored in document analysis exercises, and the ability of these conventions to add visible structure to texts can be experimented with in more creative forms of exercise.

In other words, this position about what design is for and how to do it right may not be the whole truth, but it is a decent first approximation to the truth, and is well suited to teaching non-designers the elements of design. I might also add that it includes some truths and wisdoms of which those who *have* been through a formal design education seem blissfully unaware.

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## Part 2

### Pedagogical method

THUS FAR I HAVE EXPLAINED THE APPROACH TO DESIGN which we teach on Popular Communication courses, and how I think it is suited to a pedagogical conversation with people who have responsibilities for design but who have not had any formal training in it. Now I shall explain how we go about doing it.

I should say from the outset that beyond my experience as a technician at Goldsmiths College and a couple of days teaching a two-day short course recently at Coventry School of Art and Design,<sup>11</sup> and other even shorter sessions at Oxford Brookes University and Manchester Metropolitan University, I have no college teaching experience; certainly no experience of supervising students on a course lasting three years! I wonder ‘How do you do that?’ as much as doubtless the academic teachers here wonder how I can impart any meaningful teaching about design in just two days.

### Approaches vary

There is no one standard Popular Communication way to teach design. There are different emphases of curriculum and different ways of using the time between the eight or so PCC and PK lecturers.<sup>12</sup>

Jan White is a highly entertaining lecturer who uses huge numbers of 35mm slides; there are no practical exercises during his seminars. Polly Pattison, whose speciality is teaching newsletter design, also uses many slides but presented at a slower pace and with more discussion; she also conducts ‘clinics’ at which the newsletters of course participants are analysed.

I use a mixture of methods, and in this section of the paper I shall describe some of the techniques with which I have experimented.

### **Discussions about genre, function and expectation**

I often find it useful to display (in reality or via slides) examples of different kinds of publications and documents and ask questions of the group such as *What do people expect of this kind of design?* and *What would 'effective design' mean in the context of this artefact?* Manuals are to be consulted, adverts are to persuade, novels are to be read.

I also show that within a single publication, different sections may have different design priorities. For a guide to Bed & Breakfast accommodation, the cover is there to sell the book, the index and maps aid reference, and the descriptive pages mix information presentation with pleasant reading.

I also find the concept of *design as rhetoric* useful to present in this context, especially in the form espoused by Richard Buchanan.<sup>13</sup> Students find it a bit bemusing to have Aristotle spouted at them on a Tuesday morning, but the concept that design is a form of communication with a component of information (*logos*), a component of character/identity (*ethos*), and a component of affect (*pathos*) is a useful way of discussing that there are different things that a design might seek to achieve, and that different kinds of designed product place different priorities on these aims.

Discussions about genre, audiences and the communicative intent of the publisher – very concrete discussions, I might add, based on analysis of real examples – are very useful in helping students to see that design is a social act that takes place within a culture or between cultures, and that there is a kind of 'conversation' between the publisher and the reader, and between published product and reader too.

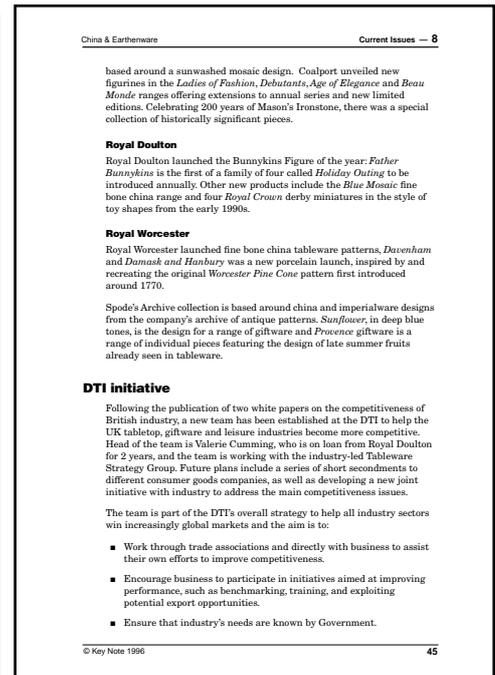
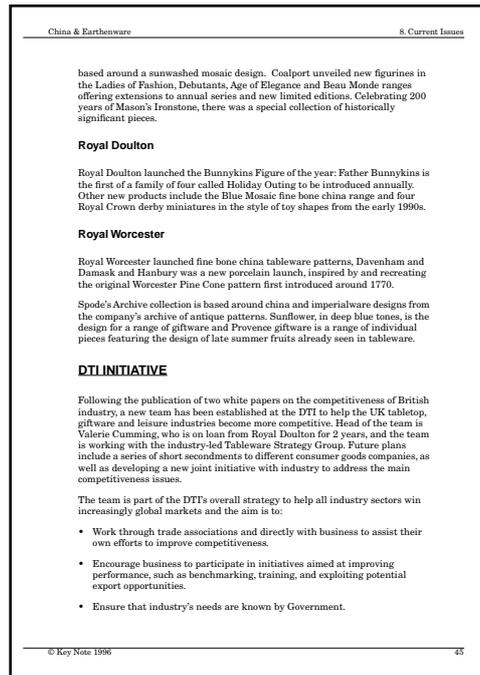
### **Case studies, and 'before and after'**

In searching for a definition of design, David Sless has approvingly quoted an observation by László Moholy-Nagy to the effect that

Design has many connotations. It is the organisation of materials and processes in the most productive, economic way, in a harmonious balance of all elements necessary for a certain function. It is not a matter of façade, of mere external appearance; rather it is the essence of products and institutions, penetrating and comprehensive. Designing is a complex and intricate task. It is the integration of technological, social and economic necessities, and the psychophysical effects of materials, shape, colour, volume and space: thinking in relationships.<sup>14</sup>

I also believe this is a useful definition; and I would therefore argue that there is a great deal of benefit which a student of design can derive from hearing an articulate presentation by an intelligent designer of how he or she thought through the 'design problem' – how all these relationships were balanced and taken into account. Such descriptions are even more vivid when they involve the redesign of a publication.

**Right:** A 'before and after' demonstration for an in-house seminar for Key Note Ltd, showing the redesign of a page of one of their market research reports.



With so many successful publication redesigns to his credit, and thousands of 35mm slides to document them, Jan White is well placed to use case studies in teaching, and he uses them well. I also use this approach. For in-house courses in document design, I try to get hold of sample documents on which I can perform a demonstrative redesign – which makes a more compelling illustration of what I am trying to explain. The challenge here sometimes is to get students to realise that these kinds of design experiment result in just *one possible redesign* of their document, and that they are not to bow down and worship this particular redesign!

As an example of such a redesign, I present at the top of this page a 'Before and After' performed on a market survey report for the Key Note organisation, in which the Before is a near-exact replica of a typical page from the report, and the After is the final step in a redesign which proceeded through several small stages. In my presentation to Key Note staff, I showed all of these intermediate steps, asked if they could 'spot the difference' at each step, and then explained why I had decided to do what I had done.

The Before and After technique is a powerful teaching method when accompanied with good discussion and clear explanation.

## Document analysis exercises

So far I have discussed pedagogical techniques which take the form of conversations with a group of students, and in my courses there is always also some straightforward lecturing (communicating knowledge, viewpoint and terminology). But now I want to turn to methods of study in which the students work with each other on a project, without the continuous involvement of the teacher.

One fruitful method which I have used a great deal in recent years is a form of concentrated document analysis session that is conducted, since time is

short on a two-day course, at high speed. This often results in high spirits and a game-like atmosphere, and I usually present it as if it were a game. Typically the 'rules' are as follows:

- Prior to the exercise, I will have been expounding some aspect of graphic design; perhaps related to genre, or techniques for grabbing reader attention, or maintaining continuity throughout a publication while giving an identity to its sections. The exercise objective is to criticise a group of documents according to the criteria just espoused, giving students practice in deploying the concepts, and seeing how these concepts relate to their own prejudices and preferences as readers.
- The students are divided into groups of three, which often reflects the seating arrangements set up for us by the training venue, which is typically a hotel. Since an average course has 10–12 people on it, we have three or four 'teams'.
- I will have gathered six or seven documents for them to analyse. The choice of document depends on the audience, and what aspect of design we are learning at the time. Magazine design discussions which look at genre, culture and types of audience are fun to prepare for, as I drop into the newsagents on the way to the venue and buy an incongruous collection of magazines such as *House & Garden*, *Radio Times*, *Marie Claire*, *Empire*, *Bella*, *National Enquirer* and *Minx* or *Sugar* – then throw in a couple of trade magazines such as *European Plastics News*. If the course has more of an information design orientation I would bring along various manuals and product user guides instead.
- Each 'team' gets one of these publications to examine, argue about and make notes on – and only six minutes to do it.
- When the six minutes are up, the publications circulate to the next table, and the process is repeated until each team has seen all of the publications.
- We then come back together as one group. I hold up each publication in turn, and get the teams to explain to each other what they noticed/liked/disliked about each. Often the teams have come to different conclusions about the publications, and I intervene by asking leading questions or making observations, hopefully wise ones.

This game has variations. Sometimes I ask teams to work with just one or two magazines for a more extended period, to find four adverts that they think are cleverly put together, plus some they think are a waste of space, then make a presentation about them to the rest of the course.

It is a key element of all such analysis exercises that they are performed in small groups and not by individuals, because it is most important that the students learn to *talk about* and *evaluate* design. Discussion is often extremely lively. I am sure that the pressure of time, and of having been asked perhaps to select four or five examples for presentation, makes for more committed discussions – and sometimes good-humoured arguments.

**Ernesto Samora** lives in the Cabinda enclave of Angola, works for the oil company CABGOC, and uses PageMaker to produce the company's bilingual journal for staff and the local community, *Jornal da Cabinda Gulf*.

He spent several days in London on Popular Communication courses, including one-to-one tuition from Conrad in how to implement better his newsletter design using PageMaker and Illustrator.

Photo: Conrad Taylor



### **Practical design exercises using computers**

In the late 1980s we started, in Britain and Sweden, to market courses such as *Better layout using PageMaker* or *Advanced design with QuarkXPress*. This was in recognition that design these days is done mostly by people using DTP software; indeed, a secretary may have been given DTP software and deemed to have had the status of designer conferred upon her by that act. The premise behind the courses was that people might have acquired basic software skills, but be at a loss how to design the pages; these courses were therefore courses *in design*, but with reference to its implementation in DTP software, and with practical exercises/experiments in design to be executed in that software.

From a pedagogical point of view these courses worked, but they did require a great deal of active supervision of students as they did exercises. Students were encouraged to print out what they had done now and then, and group discussion of the print-outs, with suggestions by the course leader, was essential and very useful. People often commented how enlightening it was to see the same design problem solved so many ways.

However, economic problems put paid to our involvement in this form of training. Populär Kommunikation purchased ten Mac Plus computers, which were obsolete after a few years. In the UK, PCC hired in computers, and I spent many a less-than-happy hour installing them in hotel rooms. Later, we hired training rooms full of ready-equipped computers, first at Southbank Studios and then at Appropriate Learning, at great expense.

More intense supervision of exercises on such courses was needed, which meant it was hard work to teach more than six people at a time. Sometimes, despite a stipulation that it was a precondition of the courses that the student should be familiar with the software, companies ignored this when

sending people for training; the hapless individual would then soak up a disproportionate amount of the supervision, which was resented by other students. And the increased overheads, spread over a smaller number of trainees, pushed fees up to levels that dampened demand.

We are still prepared to do such training on an in-house basis, but have had to put on hold offering public courses in this style. I think this is a shame, since it is of obvious value for students to learn design at least in part in the context of the computer systems in which they will implement it. This is one type of instruction where conventional tertiary and continuing adult education, with more time available, premises and fixed assets, has the advantage over us. I wonder if there is scope for collaboration.

However, the DTP revolution has transformed the content of, for instance, my *Layout and design basics* course. In a discussion of how to control factors that have impact on legibility, such as leading, or the algorithms which perform hyphenation and justification in columns of text, I have to be prepared to describe how this is implemented in software – and I often demonstrate it with a projected computer display.

These days, many who come on design courses are familiar with DTP, and courses like *Layout and design basics* which are not ‘hands-on’ satisfy them, while also meeting the requirements of those who are not responsible for graphic production themselves, but who are seeking design instruction to improve their confidence in dealing with suppliers such as graphic design businesses. (I think it is worth pointing out that industry does not always have the same confidence in designers’ ability to come up with the right solution as designers may have in themselves – and quite often, from what I have seen, industry is right to be sceptical! *Quis custodiat custodes?*)

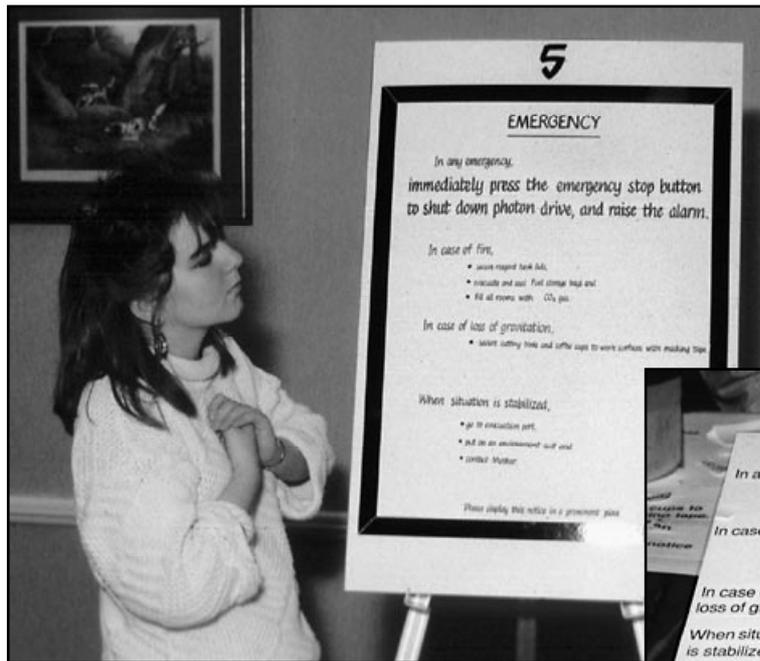
### **Houston, we have a problem...**

Finally, I shall describe one specific practical exercise which I used for several years, because it has a bearing on education in *information* design, rather than general layout or publication design. I believe I first tried this with the technical authors group at ICL West Gorton, a group which has contributed several of the leading lights of the Institute for Scientific and Technical Communicators and which, since its transformation into Kudos Ltd, has also been a leading supporter of the Information Design Network.

Students were divided into groups and given the following to ponder:

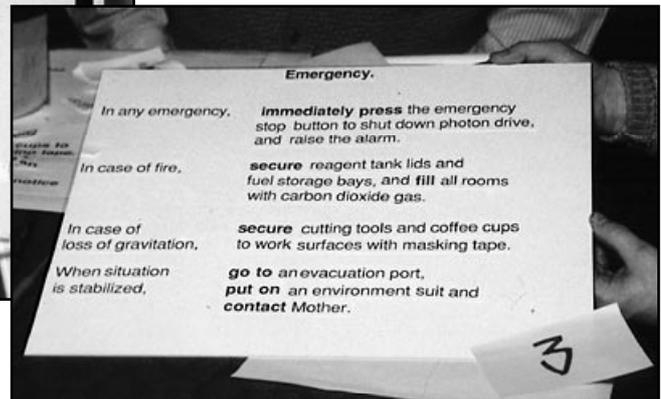
EMERGENCY. In all cases of emergency, immediately press the emergency stop button to shut down photon drive, and raise the alarm. In case of fire, secure reagent tank lids and fuel storage bays, and fill all rooms with carbon dioxide gas. In case of loss of gravitation, secure cutting tools and coffee cups to work surfaces with masking tape. When situation is stabilised, go to an evacuation port, put on an environment suit and contact Mother. Please display this notice in a prominent place.

This passage was given exactly as seen, as one undifferentiated paragraph without emphasis, but it was also made available to the exercise groups in



The photographs show two solutions to the **Spaceship Emergency Notice** exercise which I used to conduct on layout and design courses, specifically as an information design exercise.

It was also used in hands-on design courses with DTP software, and Björn Karlsson translated it for use in Sweden.



two or three much larger sizes, in both oblique and bold sans-serif versions at each size on sheets of PMT material which had been coated on the back with adhesive wax.<sup>15</sup> They were also given scalpels and rulers, and a coated board of fixed size on which to construct an emergency notice.

In the course of the next 45 minutes, the exercise groups would have to argue about the meaning of the passage (which has one deliberate ambiguity built into it), determine the logical groupings and hierarchies within it, and devise a layout which would convey that structure using the resources given.

A couple of typical solutions are shown in the photographs at the top of this page, which were taken with instant Polaroid 35mm slide film. It was my practice to take photographs of the groups' efforts at various stages, then mount the slides during a break. The slides would be played back to the entire course in a plenary discussion session, asking each group in turn to explain their thinking as they had tried to solve the problem, inviting comments from the other groups, and adding my own.

Groups sometimes expressed a healthy desire to re-write the texts after struggling with the design problem. This realisation of the interaction between writing and design is a valuable outcome of such an exercise. Word elision, and the addition of bullets and lines, was sometimes resorted to by students, and with good justification.

It is important to point out – as I did point out to the students – that the final design solutions which they had produced were far less important in themselves than all of the thought processes and discussions involved in the exercise. It gave them a chance to internalise what I had taught them about how to structure texts with indentation and white space, a hierarchy of font sizes, and emboldening.

## Part 3

### Concluding thoughts

In Part 1 of this paper I explained the kind of design philosophy that we tend to espouse in Popular Communication Courses, and the relevance and usefulness of that approach to design to people like myself who have been thrust into the job of designing information products without a formal education. In Part 2, I described some pedagogical methods for short courses in design. In this concluding section I would like to look at some characteristics of this model of education, including its shortcomings, and how we might try to overcome them.

#### The pressures of time

Having only one or two days to present training to a group of total strangers causes a lot of problems, but it is a situation that has to be accepted if the 'design militia' are to get any training at all – their employers are unwilling to release them for longer. Some consequences are:

- The instructor has to be willing to improvise around the students' needs; their previous level of understanding, the kinds of product they have to design, whether they understand DTP and so on. You start with a defined curriculum, but you must improvise around it.
- Probably the biggest shortcoming of this kind of training is that there is not enough time for decent extended exercises and 'homework', compared to weekly adult education meetings or full-time college education. There is a tendency to be pushed towards pure lecturing, which is unfortunate and must be resisted but is at times inescapable.
- An extended round of introductions may seem like an encroachment on the limited time available, but to omit it is a false economy. It is too late on the morning of the second day to discover that you have pitched the course at the wrong level, or with the wrong emphasis.
- If your teaching style depends on interactivity, a large audience is hard to work. It's difficult to get a sense of where people are coming from and what they need. In Popular Communication we prefer groups of 14 people or fewer. Such courses are not cheap, but they are better than those economy-class courses which try to pack an auditorium.

#### The quality of conversation

- Given that lectures and demonstrations form a large part of such courses, there is a premium on being an engaging and entertaining speaker and having first-class visual aids. The pressure for this is much greater in our market than in higher education; if you can't hold attention and can't teach, you are no good to Popular Communication and you will not be employed next term. It's as simple as that.
- Some lecturers are brilliant enough to teach successfully in long uninterrupted monologues. Jan White is an example. I can also do this when I have to, but I prefer to work with smaller groups of about 10–12 people and conduct the course as what I might call a 'managed conversation'. Socrates is my hero.

- The ideal teacher, in my opinion, has a personality in which great confidence is mixed with great anxiety. Such people constantly monitor the attitude of other people towards them and are good at manipulating the social situation to achieve a favourable outcome.

I think this is one difference between how we do things in PCC and how higher education is organised. It seems to me that in universities, staff are valued for what they know and how much they have published, rather on whether they can teach and maintain quality tutorial conversations.

### Formula versus enlightenment

One of the tensions ever-present in this kind of design training is that people come wanting to know ‘the secrets of how to design’, as if the possession of a prescriptive list would turn people instantly into design experts. I fear there is a temptation to pander to this misapprehension in the way courses are marketed:

On this course you will learn the 7 secrets of improved legibility...  
15 ways to make your front covers more inviting...  
12 great ways to spice up tables of contents...

Of course, this is a parody, but if you read some course providers’ brochures, especially the American ones, it’s a parody quite close to the truth.

This is how I have tried to resolve this problem:

- Yes, there are some ‘rules of design’, and I do provide them, almost in checklist form. Karen Schriver has also tried to compile some such rules.<sup>16</sup> If followed, advice such as ‘never set Bodoni 9pt reversed out of a 60% tint’ will prevent *some* design disasters from happening.
- However, it is important that students are led to understand that these rules derive from much mistier but more important meta-rules, which it is our duty to try to formulate. The meta-rules that are easier to formulate are those to do with quasi-linguistic aspects of design; those to do with aesthetics and composition are more difficult to articulate.
- Finally, it is vital to get students to realise that design is fundamentally, as Moholy-Nagy said, about ‘thinking in relationships’.

Very recently I had a conversation – almost an argument, actually – with Björn Karlsson about what it is that PCC & PK give to people. Knowledge, he said. No, I replied, this is a field in which knowledge is hard to define. What we seek to transfer is understanding. Perhaps even some wisdom.

But can that be done in two days? I think it can, though maybe not equally for everyone. And it’s important, because simply dripping knowledge into the heads of students is not what teaching design is about. It’s about doing unto others what Jan White once did to me: catalysing a paradigm shift, causing me to look at what I knew and what I was doing in a different way, organising the field according to new perspectives.

If you are already on the road to Damascus, it doesn’t take that long to knock you off your donkey. Just a well-aimed thwack to the head.

## The author

Conrad Taylor is, for better or worse, largely as is described above. He also writes for *Internet Publishing*, a Swedish 'knowledge-letter' published by Populär Kommunikation and edited by Lillemor Bulukin.

Conrad is the Secretary and the newsletter editor of the Information Design Association, represents the IDA on the steering group of the Information Design Network, and was active in organising InfoDesign'97.

He has no degrees or qualifications.

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## Notes

- 1 For information about my involvement with the Peace Quest multi-community multimedia initiative, see the Web Site subset which I am currently constructing at <http://www.ideography.co.uk/quest/>
- 2 Cal Swann's talk 'Teaching Visible Language' was published in the conference proceedings, *Typography: New Era, New Language*, edited by Michael Gorman, published by Righton Press, Manchester Metropolitan University. The publication is undated; the conference was held on 17 November 1995.
- 3 *Design Discourse – History, Theory, Criticism*, edited by Victor Margolin, University of Chicago Press, Chicago, 1989.
- 4 *Layout and design basics* is presented by the author two or three times a year as a public course in a London venue, organized by Popular Communication Courses, 60 High Street, Bridgnorth, Shropshire WV16 4DX. Telephone 01746-765605.
- 5 A good account of this work may be found under the entry 'Split-Brain and the Mind' by Colwyn Trevarthen in *The Oxford Companion to the Mind*, edited by Richard L. Gregory, Oxford University Press 1987. As Trevarthen points out, early research in this area led to the conclusion that for most people the left hemisphere of the brain is responsible for language and the right hemisphere for spatial recognition. (Betty Edwards's conclusions, for which see next note, is based in this simplified view.) However, it is now believed that the divisions of function are not so utter and monopolistic, and that for instance the right hemisphere contributes significantly towards the structural aspects of language such as grammatical relationships.
- 6 The principle book by Betty Edwards is *Drawing on the Right Side of the Brain*; I do not have the publication details to hand. She has also written a sequel on more general subjects of creativity, *Drawing on the Artist Within*.
- 7 *Editing by Design* (2nd edition) by Jan V. White, published by R.R. Bowker Company, New York and London, 1982; page xi.
- 8 This is explained by Jan White in a particularly engaging set of hand-drawn sketch diagrams in *Editing by Design*.
- 9 See, for instance, 'What is the best place on the page to put your headline?' on page 67 of *Mastering Graphics* by Jan V. White, published by R.R. Bowker Company, New York and London, 1983. Similar points about how people tend to read pages are made by David Ogilvy in *Ogilvy on Advertising*.
- 10 This conversation took place at The Bonnington Hotel in London while we were both teaching courses for Popular Communication. I argued that we were telling students *half* the secrets, in that we could tell them that a subheading is made more visible by having white space disposed around it, and that for reasons of grouping

it makes sense to have more white space above a subheading than below it, but that this failed to explain why we would choose *exactly so much* space above and below. 'A millimetre higher or lower and it just doesn't look as good,' I said. Jan agreed and said that he knows how to do it, but not how to explain it. As a result of this conversation I started my own explorations of the relationship between mathematical ratios and page composition, based in part on my calligraphy experience.

- 11 *What's behind the World Wide Web* was billed as a 'two day training symposium' of the Information Design Network and was held at the Coventry School of Art and Design on 9 and 10 June 1997. About 16–18 members of staff and postgraduate students attended.
- 12 Those who teach design-related subjects for Popular Communication and/or Populär Kommunikation are: Martin Ashley, Lillemor Bulukin, Alastair Crompton, Keith Errington, Björn Karlsson, Polly Pattison, Conrad Taylor and Jan White. Two Americans, two Swedes, four English.
- 13 See 'Declaration by Design: Rhetoric, Argument, and Demonstration in Design Practice' by Richard Buchanan, in *Design Discourse – History, Theory, Criticism* edited by Victor Margolin, University of Chicago Press, Chicago, 1989.
- 14 The quotation is from László Moholy-Nagy's *The New Vision; Fundamentals of Design, Printing, Sculpture, Architecture*, published in a translation by D. M. Hoffman in 1938 by Norton, New York. This passage was quoted in David Sless' paper 'Building the bridge across the years and disciplines' which was given at the Vision Plus '96 conference of the International Institute of Information Design, and which will shortly be published (with comments by, *inter alia*, Karen Schriver and Conrad Taylor) in the Information Design Journal.
- 15 For the sake of youngsters in the audience who have never known anything other than a hand-to-mouse existence, I should explain that **adhesive wax**, dispensed from an electrically-heater roller-coater, was the preferred adhesive medium for paste-up, and that **PMT** in this context is Kodak's trade name for activation-stabilisation bromide photographic material for making high-resolution copies on a graphic arts camera. Such cameras have now been replaced in design studios by scanners.
- 16 Karen A. Schriver, *Dynamics in Document Design*, published by John Wiley and Sons, London 1997.